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Families of domains with best possible hardy constant

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Abstract

We geometrically describe families of non-convex plane and spatial domains in which the basic Hardy inequality is valid with the constant 1/4. In our constructions we use some new constants depending on the dimension; we determine them as roots of Lamb-type equations. We also use the constant defined by E. B. Davies. © 2013 Allerton Press, Inc.

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Keywords

Distance function, Hardy inequalities, Modules of rings, Non-convex domains